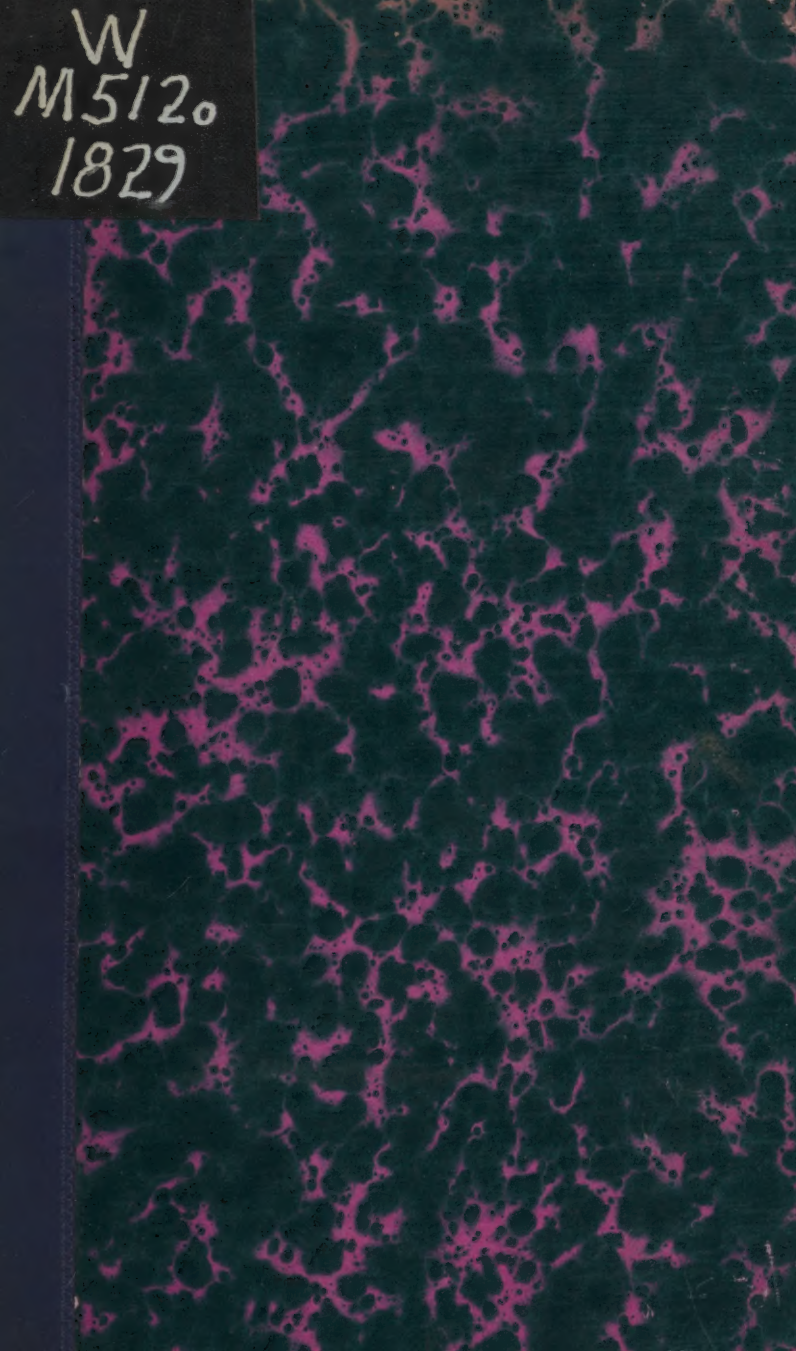


W
M512o
1829



Surgeon General's Office

LIBRARY

Section,

No. 18247

AN ORATION

DELIVERED BEFORE

The Philadelphia Medical Society,

FEBRUARY 18, 1829.

BY CHARLES D. MEIGS, M.D.

HONORARY MEMBER OF THE SOCIETY; MEMBER OF THE AMERICAN
PHILOSOPHICAL SOCIETY.

Surgeon Genl's
LIBRARY
1824
Washington, D.C.
Philadelphia:

PRINTED BY JAMES KAY, JUN. & CO.

Printers to the Philad. Medical Society,

LIBRARY STREET.

1829.

W
M5120
1829

ORATION.

Gentlemen of the Medical Society.

WHEN I cast my eyes over the audience whom it is my privilege to address on this anniversary occasion, and reflect on the important part which many of those around me are destined to act on the eventful stage of life, I feel that no small responsibility has devolved upon me by your choice ; for I regard this meeting as held, not for the purpose of transacting a mere legal ceremony provided for by our constitution, but as a more formal, grave, and solemn sitting, at which the Medical Society expects from the speaker a careful attention in the selection of his topic, and in his manner of treating it. He, therefore, who, on such an occasion as this, should venture to occupy your time with light and trivial declamation, ought justly to receive, instead of your approbation, the painful proofs of disfavour, and disapprobation.

Such an occasion as this for instilling useful principles into the mind, or giving more regular, systematic, and fruitful direction to the thoughts, cannot with propriety be neglected ; and yet it is but justice to myself to remark, that so many gentlemen, of talents and erudition qualifying them fully for the task, have preceded me in

this appointment, that small and narrow space remains for their successors to stand upon. Nevertheless, stimulated by the desire of discharging as well as I can the duty imposed on me for this occasion, I have trusted that one subject remained, on which I might perhaps offer a few plain remarks not wholly devoid of interest; although in some measure familiar to most of this audience. I have selected the subject of Medical Education—on a small portion only of which I can have time to dilate.

What subject indeed could exceed in interest for us, that which comes home so directly to our own business and bosoms, and to those of all men;—to ours as the means of preparation for those high and solemn responsibilities with which the confidence of our fellow citizens will one day clothe us; and to all men as guaranteeing them from the fatal evils which professional incompetency must generally produce, in the destruction of health, happiness, and life, and in some instances in the detriment even of the national prosperity and welfare. I find an additional motive for choosing this subject, in the circumstances of my own medical education, which having been at an early period either ill guided or almost wholly unassisted, left me to struggle at a later time with difficulties and embarrassments, by suffering which I have learned to feel for others, and to point out such a course as would have saved me an immense waste of time and labour, could it have been indicated to me at the commencement of my own studies.

Independently of the line of reading and observation to be followed by the student of medicine, there are some grave considerations which he should well weigh before he gives himself up to a pursuit which, in most cases, admits no recess or relaxation down to the latest period of life.

As a preliminary observation, permit me to say, that our profession, being founded on the misfortunes and unavoidable wretchedness of our fellow creatures, which it is intended to remove, must be regarded as essentially charitable in its nature, as founded on that excellent virtue which tries and proves all other virtue, and of which St Paul says, "Though I speak with the tongues of angels and of men, and have not *charity*, I am become as sounding brass or a tinkling cymbal; and though I have the gift of prophecy, and understand *all mysteries* and all knowledge, and though I have all faith so that I could remove mountains, and have not charity, I am nothing." These assertions are not *more* true when predicated of religion than of medicine—let him who doubts or cavils refer to the history of our profession, and he shall *surely* find that the really great men, those who have illustrated and adorned its annals, have lived and died in the clear exemplification of a truth so honourable, and I may add, so cheering to the true hearted and consistent minister of this great charity—this work of duty to God and good will to men.

The profession of medicine, therefore, not being a mercenary one, he who would engage in it should be prepared to forego all mercenary views: he must not enter upon it as the high road to honours, ease and affluence. The vast majority engage in it, to know little cessation from labour or anxiety for the whole remainder of life. It is a heavy servitude from which neither duty nor conscience will permit them to escape—for the claims of humanity are more frequently and loudly urged at the door of *his* heart, whose accumulated experience and oft proved skill have raised *him* up like the image in the desert that all eyes may be turned thither for relief. Great reputation and extraordinary skill are what we all should covet—but they bring with them the augment-

ed burthen of larger responsibility, and increased necessity for extraordinary exertion. Like mercy, "*t's mightiest in the mightiest.*"

"The quality of mercy is not strain'd;

"It droppeth as the gentle rain from heaven

"Upon the place *beneath.*"

The physician, therefore, can not say to the afflicted petitioner for relief, I know you are suffering the anguish of a dangerous disease, that the seeds of death have taken deep root in your constitution, and unless prevented by my skill, will soon obstruct its vital organization—yet I will not stretch forth my hand to relieve and save you but for a stipulated pecuniary reward. No, gentlemen, mercy falleth as the gentle rain from heaven upon the place *beneath*, without distinction: you can not buy and sell it like merchandise, it is not a subject of trade. But, all that a man hath will he give for his life. How then will you rate the proper compensation, when, under the favour of Divine Providence, you shall have saved a fellow creature's life, which it will often be your happiness to do? To do so is impossible. You will have laid him under an inconceivable obligation. He may give you money with a lavish hand, and you may be satisfied, quoad hoc, with his bountiful recognition of your services, but you will find deep graven in your heart the title for something more precious than gold, or much fine gold. What was gold to him who, but for your help when he was ready to perish, might have been hurried from the "warm precincts of the cheerful day" to account prematurely for that probationary state, for the necessities of which a longer lease of life might have infinitely momentous consequences. Our profession is not mercenary—our patients owe us more than money, they owe us gratitude, affection, a moral debt, which our

almost divine exercise of charity towards them calls for. Hence arise the bitter complaints of ingratitude which physicians in almost all ages have made against the majority of their patients; complaints which the mass of mankind will, as they have done, regard as unreasonable and ridiculous, but which are so natural and just that all who appreciate the real nature of our profession must admit them to flow from the very constitution of medicine.

This is not the place for making a plea against our employers, nor is such the object of the preceding remarks. They were made rather with a view to show, that he who would enter the medical profession, ought first to examine himself, and learn whether he possesses those moral qualities which should fit him for engaging in pursuits organised, essentially, on a model of disinterested virtue; whether the real claims of medicine will find a corresponding voice in his own breast, and whether his aim be consentaneous with its general philanthropic scope and tendency, or wholly selfish and *ambitious*. In the latter case I will take leave to say, that though he should come to understand all mysteries and all knowledge, to speak with the tongues of men or angels, as a physician he will be as nothing—his success, his popular favour and fashionable currency will be as sounding brass, or a tinkling cymbal. The names of the humane Boerhaave, the open handed Rush, the kind and humble Wistar, will be pronounced in future ages with reverence and respect—but *his* shall be wholly forgotten, or remembered as that of a recreant to the principles he had the impudence or hypocrisy to profess.

The foregoing considerations, which are not to be taken as derogatory to our just right to a fair compensation from society, but as exhibiting and enforcing only

the true grounds of our claim, lead me to remark, that the youthful aspirant ought to discover or foster a prevalently charitable temper, a paramount willingness, or rather desire to alleviate suffering and augment the sum of real happiness. He should endeavour to acquire an open ingenuous spirit, a candour and freedom from guile, which, manifesting itself in all that he says and does, may serve as ready passports to the confidence and esteem of his patients, which if gained will afford him superior facilities in applying for their use, all the treasures of knowledge which his studies may gather together for the day of their need. A cheerful and frank temper of mind is much more to be coveted than a morose and repulsive one. The hours of sickness are rendered far less dark and burthensome in those chambers where the hope illumined countenance of a cheerful physician imparts something of its own steadfast light and serenity to the troubled bosom of the sick and anxious object of his care. I shall never forget the sensations I have felt in sickness on hearing the approaching footstep of my physician. Truly, his feet, like those of the distant messenger on the mountains, were pleasant, and his countenance full of the tidings of hope and relief. Cheerfulness ought, however, to be carefully distinguished from frivolity or want of sympathetic feeling for the patient. To him frivolous behaviour is abhorrent, and deeply wounding to that self love which is fully awake to the all absorbing claims of his actual condition. Sick and drowning persons equally feel that they ought to be the centre of all surrounding interests, feelings and exertions.

An inflexible probity—a watchful prudence and circumspection, are often absolutely necessary to the physician, both for his own safety and honour, and also for those of the interests committed to him: without them

he is in perpetual danger of inflicting wounds more rankling and fatal than those which may have demanded his ministering aid.

But the qualities of the heart are not a sufficient possession. The student ought to lay, broadly and deeply, the foundations for medical studies, in those collegiate courses which are so rarely beyond the reach of young men in this country. Without such preliminary qualification he will find himself greatly embarrassed, and even crippled, in the outset and much of the subsequent progress of his labours. As his time must for a long period be devoted to his profession, he will find none for more general studies. Coming therefore to the estate of medical practitioner, and knowing little beyond the limits of his *art*, as it might be almost called, he will arrive more tardily at any eminence, and meanwhile be the frequent subject of deep mortification in the higher intercourse of life. Men regard that particular knowledge or expertness, which they have acquired after much pains and cost, as of paramount dignity, usefulness, and public concern, and allow themselves in an unconscious but very natural diminution of respect for those who, making, *ex professo*, the highest pretensions to learning and politeness, are yet found wholly ignorant or regardless of the general principles and scope of whatsoever high branch of learning, literature, or art. It becomes us to take at least a survey of them. All human pursuits, habits, conditions, and modes of sentiment may be more or less influential in the relations of a medical practitioner with the public.

I can not permit this opportunity of saying something concerning the classic languages to pass by me without remark. I ask you, whether among the fifteen thousand physicians of the United States, this kind of literature is not most lamentably and inexcusably deficient. It has

become a popular cant to boast of positive knowledge, in contradistinction from the knowledge of books, or words, as it is often expressed. For my own part, I can not discover more merit or usefulness, or a higher grade of mental culture, or more of any of the influences which elevate the tone of polite society, in a knowledge of animals, vegetables, and minerals, than are to be attained by an acquaintance with the whole series of human events, sentiments, powers, and applicabilities.

A competent knowledge of general literature, particularly of the models of past ages, will scarce be obtained without the study of the classic languages. There are vast stores, particularly of medical literature, still locked up in that tongue which was once heard from the Land's-end to the banks of the Euphrates, and I can find a reason for its neglect by our profession only in a surprising inscience of its connexion with the entire concatenation of liberal studies, of which in my opinion it is one of the first and strongest links.

The study of those languages affords a sort of exercise or training for the mental faculties, not in every case exceeded in usefulness by the so much boasted mathematical training. Most men who have obtained great literary reputation have early begun by this preparation—good fruit cannot proceed from an evil tree. In addition to these reasons, it should be remembered, that the Latin is the language of the learned, and that the learned have made it the language of medicine; and shall we be ignorant of what might be called our vernacular tongue? Must we not soon have vocabularies at the end of our dispensatories to teach us that *mic. pan.* means crumbs of bread, and that *sacch. alb.* is the hieroglyph for white sugar?

Many of the most valuable medical treatises are as yet untranslated into the European tongues, and are

consequently sealed books to him who is ignorant of the Latin language. I may mention among others the great work of Baron Haller, the few volumes of which cost one of the greatest men that has ever adorned our profession more than thirty years of toil and expenditure. It is vain, nay more, it is absolutely ridiculous to sneer at that ardent and gifted philosopher, to boast of the lights of the present age as having outshone and dimmed the splendour of his illumined page—it is no such matter. That work has never yet been superseded, and will never be superseded until a gigantic genius, perseverance and learning like his shall combine with that strict impartial adherence to truth, that modest diffidence of his own powers, and that abhorrence of dogmatism, which makes his work come to the student like personal experience, and not like a second hand detail of events. The same reasons which I have assigned as motives for obtaining a knowledge of the Latin language apply with nearly the same force to the Greek. I shall not occupy your time, therefore, with further observations on the subject.

Of the modern foreign languages the French is to us by far the most important, as containing the writings of medical philosophers who have done so much in our days to advance the standards of our ever progressing science. The German and Italian are also much to be coveted as the keys to a great and priceless treasury of learning.

I shall state it as my opinion that a young man, destined to the study of medicine, should begin by obtaining a knowledge of the Latin and Greek, the French, German, and Italian languages. If the requisition be deemed exorbitant by any one, I am sure that he will not continue long so to regard it, after having set fairly about their acquisition, particularly the three latter.

History, geography, voyages, and travels, all concur to enable the student to obtain a clear view of the progress and various revolutions of medicine ; the laws and records of epidemics and endemial diseases ; the *materia medica*, which draws its supplies from every region ; the varieties of the human race, and the effects produced on man by the climate, soil, food, manners, and political institutions of various countries.

He should have a certain degree of acquaintance with the classic writers of more modern times. Can he whose avocations lead him daily into the world, where he is called on to assert and protect his claim to a character for learning, venture to be ignorant of writers whose sentiments or style are the perpetual subjects of reference and the criteria of good taste and liberal feeling in the best classes of society.

I regard it as a desideratum that a general idea of these various departments of knowledge, should be obtained, as a positive preliminary or inception to any introduction into the portals of our profession, and that the great looseness which so extensively prevails as to the preparation of the mind for this work, should give place to a greater strictness and rigour of investigation as to the state of fitness in which the aspirant may be found either by private teachers or public bodies.

Fitted now for an entrance into the great field of his professional studies, let him place himself under the guidance of some judicious and conscientious physician, the calls of whose practice may leave him sufficient leisure to attend to the duties of the preceptor, and whose sense of the responsibility which this relation imposes is both definite and acute. How many of my auditors have a right to complain of the total neglect of their intellectual culture which they have received at the hands of private preceptors, and that too in many cases, doubt-

less, where a liberal fee had been paid as the supposed guarantee of a faithful discharge of this weighty obligation.

I know full well that multitudes of young men are sent from college to the offices of physicians, who never ask them a question as to the progress of their studies, maintain no salutary restraints on their conduct, and satisfy the demands of a stupid conscience by putting into their hands some battered cranium, a volume or two of dry descriptive anatomy, with a dispensatory, and Cullen's First Lines, or Thomas's Practice. In this way the pupil is allowed to toil in vain, until, hopeless of making any visible approach to the termination of his studies, he folds his arms in the quiet and soothing hope that, after from one to three years of such study as this, he will be thought worthy of being transferred to the university or college, where learned professors shall have all the pains of collecting the thousand and ten thousand rills of knowledge, to pour them at once in a fertilizing torrent over his passive and comfortable organs.

I pray you not to regard this as a distorted caricature—indeed it is but the early history of my own labour, or as I should the rather denominate it, of my own idleness.

Is it not a cruel and culpable thing to permit any one to waste in this manner those precious hours which can never be redeemed? Is it not criminal to permit a student to remain in an office two or three years, reading anatomy and surgery and practice, &c. &c. and all to so little effect, that perhaps the very first anatomical demonstration communicates more real and available knowledge, than months of toil or idleness under your care had endowed him with?

I heard a medical gentleman of this city say, that some years ago, a young man came here to attend the lectures

before the commencement of the session, and falling in company with some friends was conducted by them to a private dissecting class. "How long have you been studying?" was the question asked him by one of the gentlemen. "Only three years." "I suppose you have dissected then?" "No, never: but do for heaven's sake show me a muscle." "Why, that is a muscle, the sartorius." "That! well!"—and here a long whistle expressed his astonishment. "Now," said he, "a little cellular membrane, just a little cellular membrane, if you please." "Why this is a cellular membrane—have you studied three years and do not know cellular membrane yet?" "Yes," with an expletive which I have no inclination to repeat, "yes—and you have taught me more anatomy in five seconds than I had learned in the whole time."

Now, gentlemen, this anecdote may serve to show that though you may read all the books from Barthez and Haller down to the last published arrangement of the tissues, yet I may defy you to comprehend in the smallest degree the meaning of muscle, cellular tissue, peritoneum or any such thing, unless your reading be accompanied with anatomical demonstrations either human or comparative: you may learn with Champolien to read hieroglyphics on Egyptian monuments, or to speak in the new language on a fiddle or clarinet, or make any other seemingly impracticable human attainment—but anatomy you can only learn with your eyes and hands: taste, hearing, and smell have nothing to do with the matter.

It is not absolutely necessary to begin by attending a course of lectures on anatomy, but it is necessary that the teacher should be both able and willing to discharge his duty to his pupil. Let preceptors feel as they ought to do, and we shall have no reason for these complaints. The learned Hernius remarks that Plato, Aristotle and Plutarch have often repeated, "*à bonis quidem, bona dis-*

ces; si vero malis conversare, pristinam quoque mentem perdes,” and “that preceptors should not have a mere ascriptive benevolence towards their pupils, but should love them truly, and as careful husbandmen who place hedges round their tender plants, so should these see to it, that none but the properest germs of knowledge be permitted to pullulate.”

The First Lines by Dr Cullen is one of the earliest books put into the hands of the private pupil, and though it be one of the plainest books on the subject that has ever been published, it is a Sisyphean labour to whomsoever attempts to comprehend it without any previous anatomical and physiological studies. Let him roll the stone to the tiresome summit, his labour is vain and must be repeated again and again, and leaves him at last no nearer his object than at first. So also with Cullen's *Materia Medica*, and the lucid exposition of therapeutical doctrines and practices by the clear headed professor of the University of Pennsylvania; they are all Sibylline leaves and Delphian oracles, to be read after the facts and not before them; it is time wasted to read them until the scales have been removed from the eyes by the master touch of some anatomical demonstrator, private or public.

Nothing is easier, however, than to acquire an exact and, to a considerable degree, extensive acquaintance with medical science, in a short space of time too, if the attempt be rightly made. In proof of the truth of this assertion, I need only refer to many of my respected fellow members, who, although as yet numbered among the junior class of our society, have been borne in their short but well directed career to a point, whence they may dare exclaim, in the language of the Roman, *Inveni portum! spes et fortuna, valete!* young gentlemen, whose hopes of success are already lost in its certainty, and who having provided themselves with the rich treasures of knowledge

may bid defiance to the caprices of fortune in the remainder of their course.

Let the student then take into his hands a book of descriptive anatomy and a scalpel, and on the human subject, or some one of the inferior animals, exercise his own powers of observation: every stroke of his scalpel, like the dint of flint and steel, will reveal the light which he in any other way might grope for in vain.

No objections can be urged here as to the difficulty of procuring subjects. There is no part of this country in which a faithful preceptor may not find opportunities either in his post mortem examinations, or in more leisurely and unconstrained dissections, to indicate those general characters and distributions of organism, which, once seized upon by the mind, may be profitably followed up in the dissection of animals, particularly the quadrumanous animals. Not the least advantage of this mode of proceeding is, that it will rarely fail to infuse a taste for the natural sciences, which are generally prosecuted with most success by members of our profession; and it is well known that such a taste alone often serves as the induction to a profitable love for science in general.

Any man of ordinary capacity, under proper guidance, can be made in a very few weeks to comprehend the general idea of tissues, their chemical nature, organic composition, arrangement and distribution. This is an easy, and I may say abecedarian lesson, which, once acquired, renders facile the comprehension of printed details and description—a vigorous application of the mind to which soon fits the student for the study of functions, or physiology.

I have said nothing in regard to *books* of anatomy, and nothing need be said on the subject; such as are in common use, whether European or American, being beyond my praise. I would suggest that every student

ought to have within his reach a volume of comparative anatomy, such, for example, as the English copy of Blumenbach's work, with notes by Mr Lawrence, which will meet all his requirements on that particular head.

But in physiology, what course ought to be pursued? Vivisections admit us at once into the hidden recesses of the functions: but they are inhuman and unchristian, except when conducted by competent persons, and for specific purposes, of real concern to the individual or the public: in this case, he is to be deemed squeamish or affected who condemns them. They have been the sources of inappreciable benefits to our race by the lights which they have shed on the path of the practitioner; but I would counsel the tyro not to dip his hands in innocent blood, poured out for the gratification of an ill-directed curiosity for which no excuse can be found, inasmuch as we have numerous records of experiments conducted by the masters in our science—records so graphic and faithful, that they contain all *he* can wish for. This leads me to remark that one of the first physiological works that I should desire to place in the hands of a student who was prepared for the study, is the *Experiences sur les Parties Sensibles et Irritables du Corps Humain*. This work contains the history of a vast number of experiments, in relation to the two great leading phenomena of sensation and motion in all parts of the body, by Haller and his pupils; and, if I am not deceived, would most advantageously precede the perusal of works on the general subject, as giving definiteness and precision to the pupil's apprehension of the general principles of functional operations.

Of all works on the subject, I should next prefer to place before him Haller's treatise *De Physiologia Corporis Humani*—called emphatically Haller's great work;

but as it is both untranslated and rare, it is not sufficiently within the reach of the pupil.

We have a most valuable exposition of the present condition of physiology in the late work of Dr John Bostock, in three volumes octavo. I recommend this book because it is a close imitation of Haller, and deserves to be called the English Haller—not as a servile copy, not as a plagiarism—but as managed on the same plan, giving good preliminary descriptions of structure, and then laying out in clear and tangible shapes all that is greatly important both of theory and of fact in ancient or modern physiology. Indeed, it is a body of doctrine, for which the medical public is under great obligations to the learned, modest, and impartial author. I have not found a dogmatical sentence nor line in that work, that can be attributed to Dr Bostock.

I beg leave to observe that I have not pretermitted the volume of physiology by Broussais, recently presented to the American public by two of our most esteemed fellow members, on account of any lower estimate of its value as a scientific treatise. On the contrary, I regard it as a most excellent work—a work worthy of its illustrious author—a work bearing the impress of those distinguished talents which, in an age remarkable for a spirit of emulation among medical men, have enabled the professor not only to signalize his own name, but at the same time to effect useful and great changes in the practice of the art in various countries. It exposes in a clear and tangible form those doctrines and general principles which are peculiar to the physiological school; but I think that, as not composing an absolute body of physiology, ancient and modern, its study should rather follow, than precede, that of the English physiology.

The *Anatomie Generale* of Bichat is a work in which

the subjects both of structure and function are very lucidly explained, and set forth with a convincing simplicity and power combined, accompanied with a train of reasoning so philosophic and attractive, that the attention of the reader, once fixed on it, is drawn along with the truest satisfaction and profit.

Not only the general principles of physiology, but the various orders of tissues, whether primitive or derivative; their mutual connexion and dependence, as well as their distribution; will be well conceived of by the diligent student of Bichat's immortal production. The general treatises of Blumenbach, of Richerand, of Adelon, Magendie, Mayo, &c. should serve as the conclusion of the general study, to give place to the examination of monographs. Of these there are great numbers within his reach, and many of them sufficiently explained and set forth in the analytical reviews of the journals.

The student ought to read Reaumur's, Stevens's, Spallanzani's and Fordyce's experiments on digestion; the remarks of Montégne, Philip, Brodie, with a good analysis of the prize essays of Leuret and Lassaigne and Tiedemann and Gmelin.

In order to obtain a knowledge of the circulation, both as a physiological function and as affected pathologically, I would strongly recommend the perusal of the never to be forgotten *Exercitatio Anatomica de Motu Cordis et Sanguinis in Animalibus*, by William Harvey—that immortal production of genius, upon which the whole of our modern improvements have hung: a production, which, though it *was* the *first* bright flash of physiological truth, yet will shoot its beams far down beyond our times into the most distant futurity, long to be, as it long has been, one of the clearest and most philosophic expositions of fact in relation to this topic.

The thin volume on the pulse by the late Dr Parry

might very well succeed the one last mentioned. It may be soon examined, and yields for a slight labour a heavy harvest of information on the powers of arteries and the various conditions of their exercise. Let this be succeeded by Mr Hunter's treatise on the blood, or I should rather say, so much of it as relates to this head—which is comprehended within the first sixty pages. An idea should be also obtained of what relates to this subject in Le Gallois, Philip, Brodie, Hastings,—in Carson's Inquiry and Barry's Hypothesis.

Respiration, animal temperature, hæmatisation are fully treated by many authors whose principal points may be mastered without difficulty by the diligent student.

Without fatiguing you with monotonous bibliographical details, which after all would be found most imperfect if pressed into so small a space, I shall proceed by urging the student to master function after function in regular order, making careful notes of interesting points as he advances and reading those notes attentively from time to time in order by the act of reminiscence to make sure of the fruits of his labour. He should revise his knowledge, or it will be lost. Knowledge should be treated like suspected persons; it should be held under *surveillance*: not like convicted persons in durance—not imprisoned—no—the quack only puts his knowledge under lock and key. The treasures of the truly learned are overflowing fountains, lavishing health and gladness to all who will drink of their abundance.

Proceeding in this manner the student will make daily accessions of knowledge in animal chemistry, minute anatomy and all the congenerous departments, by means of the references he will constantly have to make to books in those various subjects. His acquirements in the important subject of pathology, will particularly be the subject of daily augmentation, and place him in a condition

to master the more direct and practical objects of his delightful pursuit—delightful surely, if followed out in a regular and predetermined course of reading, experiment and reflection.

Chemical experiments on the nature of the blood, the various secretions, and the means and conditions of their modifications, on respiration, animal heat, and the constitution of the various solids, may fill up every hour not claimed for the regular and systematic course.—Like the flowers or fine minerals which draw us aside from the forward path of a journey, these will yield much to recreate and enrich the mind.

It does not become me, gentlemen, in this place, and in so short a time as custom and your patience allow, to enter into all the particulars of a course of physiological studies, which with more space it would be easy to do. My object is rather to indicate the general direction which the line ought to pursue, and not all the particulars of its protraction.

The student should next proceed to take up the subject of general pathology—for example in the work of Dr Parry. There is also a great deal to be learned concerning general principles in Mr Hunter's work on the blood, which under so unassuming a title is replete nevertheless with important discussions applicable to the elucidation of many varied pathological states.

The student cannot have a better book placed in his hands for explaining the main points in the Broussaian pathology than that which is denominated *Conversations sur la Médecine Physiologique*. I admit that it does not comprehend all that ought to be known; but it is so graphic, spirited, and withal faithful, as to be peculiarly suited to open the way to that particular school. The *Principes* of Begin; the pathological remarks of M'Bride; portions of the works of Armstrong; the essays by Dr Barlow,

and Abercrombie; Pujol's first sections; Broussais's Examen; Laennec's treatise; and many more, not necessary to enumerate here, demand a share of his attention.

Inasmuch as almost all the diseases that fall under the cognizance of the medical practitioner consist mainly in some departure of the vascular and nervous systems from their normal state, it is vastly important for him to acquire clear and defined notions respecting the real nature, causes, and phenomena, not only of healthy vascular action, but also of the various grades of departure from the healthy state. The medical world is divided between two theories on the subject of inflammation: one of which advocates the opinion that it depends on a passive engorgement of vessels from diminished power of resistance; the other, that it is an active state of the same vessels—an intrinsic increase of power. This is the real and true punctum saliens of pathology; and he who starts fair here will run with ease the whole round of the subject. There is abundant material within the reach of the student to enable him to form a correct judgment about it.

How easy is it for him who has made himself master of the discussions on the proximate cause, or as the term is modernized, the *pathological cause* of inflammation, to apply that knowledge to the investigation of an extensive catalogue of diseases—as pleuritis, hepatitis, splenitis, cystitis, &c. &c. His labours in the field of physiology have taught him the true relative influence of the various organs in the animal economy. Such a student would have no difficulty, I had almost said *a priori*, to determine and ascertain the phenomena which an inflamed or irritated condition of any organ ought to develope—either in itself, or in the general economy of the body.

Supposing him now ready to commence the study of

the practice of medicine—where shall he choose out of the immense collections on this subject?

Is it possible to find a general treatise more adapted to his wants than Cullen's First Series? Is that work excelled by any that has since appeared for faithful and graphic portraiture of the external characters of disease? Let him then commence with this, and frequently compare those masterly delineations with the phenomena of disease, for which he is now well prepared, and for which his preceptor will now furnish him with ample opportunities from his practice. Here he can criticise and appreciate the great Cullenian doctrine of debility and spasm, which, *mutato nomine*, daily meets us as congestion, engorgement and irritation.

M'Bride's Treatise, Dr Good's Study of Medicine, Dr Wilson Philip's Treatise on Febrile Diseases, and some good nosological collections, will afford ample scope for the exercise of his pleasing occupation.

How can I proceed to indicate the titles of monographs which next claim his attention? Are not the shelves of our libraries groaning under the weight of volumes which a prolific press daily augments! The bare catalogue fills a volume. The texts on yellow fever would occupy ponderous tomes. It is out of the question to prescribe a course of reading here. Nevertheless I will take the liberty of mentioning a few, and more especially one book, which as it has had great influence in the formation of my own sentiments, may be naturally supposed to have much of my confidence.

Shall I dare confess my partiality for the essays on fever by Dr Fordyce,—to say that I regard the study of this volume as indispensable to the student?—not because it is a plain book, well written, well arranged: no, it is tedious, prolix, full of repetitions; so uncomfortable a book, that three out of four of those who take it

up, throw it by in disgust. But let me persuade you to read it, to note it, dwell on it, and I venture to affirm that you will rise from its study with more direct, available and sound information on the subject of fever, that predominant, universal symptom of morbid derangement, than you can derive from any single work in the whole circle of English practical medicine. Such is not the general estimate, and I am sorry for it; not because I find myself in the minority, for I will pin my faith to no man's sleeve; but I am sorry for it because it occasions that excellent volume to be passed by, and to become like many other invaluable treatises obsolete, to fall out of notice, to be unemployed, useless and forgotten, in the restless search after novelties. After all its neglect this is a standard work. Heurnius says, "in forming our plan for study, we should not take all the writers, but only such as are best, whom a long lapse of time has not been able to destroy. There is no painter who would not prefer a picture by Apelles or Parrhasius, Zeuxis or Leucippus, to one of our own day; for time is the indicator of what is good, as well as the destroyer of what is bad, in doctrine." Time shall show whether this work is not destined to become one of the medical classics. The treatises on gout, rheumatism, variola, and its modifications; the general outline of the characters of cutaneous diseases, which have almost become a separate science; all these will be well appreciated by the student who has come thus far.

The pupil now will necessarily have acquired a more or less extensive acquaintance with the department of *materia medica*; and that department should now be made the subject of formal attention and study. Cullen, Paris, Thompson, Chapman, Coxe, &c. may be read not in succession, but collectively. I mean with perpetual reference, collation, and comparison of one with

another. I think this study ought to be left until this period, because the mind of the pupil will not before this be found imbued with clear and definite notions of general principles in therapeutics; for we can not separate *materia medica* from therapeutics: but now he will not only have acquired a great fund of many sound principles, but a great many specific appropriations of them. What value ought we to attach to learned disquisitions on the indications and *modus operandi* of medicinal articles, addressed to him who has no preceding knowledge of the effects to be produced or the organs to be acted on for their production! What is the value of formularies, whether manual or magistral, to the quack? They only make him more and more a quack?

Surgery and midwifery come next in order. And as they are branches which, when ably followed, lead, perhaps more directly and rapidly than any others, to professional reputation and to independence, they will receive a large share of attention from the emulous and ambitious student. I have left them thus late in the order, because I conceive this to be their place. A vast amount of preliminary knowledge of these branches is involved in those studies which have been precedently enumerated, and they have opened the way for him to acquire easily the object of his search in the latter.

Great reputation and skill in either of them, fortune has reserved to but a few choice spirits. But let a man cut with the neatness and dexterity of a finished dissector—he is nothing without the information that ought to guide and instruct his bold and daring hand.

Such, gentlemen of the Medical Society, is a rude sketch of the course of medical studies which, after some reflection and experience of the difficulties occasioned by want of method and system in the early stages of medical education, I have ventured to recommend to students

whose circumstances enable them to pass two or three years under the care of a private preceptor, in a situation remote from public establishments for this kind of instruction.

Have I asked too much of the medical student ? will it be found difficult or impossible in remote villages or towns, to make such large preparation for attendance on the lectures ? I have presented you with but a meagre and perhaps you will say common place list of studies : so much the better ; it is what I have desired to do ; I hope you will all think so ; for in that case I trust you will perceive that the difficulty of the task is less than at first you might have supposed. Let us reflect a little.

The whole of the subjects I have pointed out are scattered through less than one hundred volumes, which may average say four hundred pages of the octavo size, amounting to forty thousand pages. Suppose him to read them all from title page to colophon, he would have fifty four pages per day for two years. And shall a student do less business than this ? He has sixteen hours to work in, and shall he read only four pages per hour ? But a little practice, and he who commences the study of medicine aright ought to have had not a little practice in reading, a little practice I say enables a man to read a book without dwelling on every page and sentence and line—many parts of books are as well read by paragraphs as by sentences—and in this way the amount of saving of labour is immense. Some men seem to read, I was going to say, as by steam power. They get through books as a steam loom gets through a yard of muslin. I am not advocating a careless and inattentive perusal of books ; but I mean only to show, that of the forty thousand pages, much may be gone over rapidly, and in most books not a little may be

omitted altogether, by a practised reader. I shall venture to say then, that thirty-five to forty pages read every day would leave ample opportunities for recreation, for occasional calls of business, accidental interruptions, experiments, conversation, visiting patients, making memoranda and extracts, and, in short, for the whole routine of events that might properly be allowed to occur in the history of a medical student.

What conscious pride must he feel who comes prepared in this manner! Possessing a various and extensive acquaintance with the topics that are treated of in the whole circle of lectures, how much more efficaciously would he hear, how much more clearly judge and remember the rich lessons of his professors! With what confidence would he come up to that trial, where his talents, his industry, his good and true performance of duty, the hopes of his parents and friends, who have led him thither at so much pains and cost, hang suspended; where all that he is, or is like to be in his profession, is spread out in unreserved exposure before the inquiring gaze of his professors!—Gentlemen, it is a very solemn matter. He that provides best for it will come best off in that day. Let the pupil realize, when he begins to study medicine, and every day that he continues it, but a small portion of the anxiety which the ultimate decision on his claims will bring with it, and it will serve as a constant spur in the onward path of improvement—it will give rapidity and completeness to his preparation, from which the greatest benefits must flow, not only to himself, but to the individuals who are one day destined to render him the depository of their dearest interests.

I will release your attention, gentlemen, when I shall have offered a few remarks on the simplicity of the course above indicated. If one of you were going to begin

for the first time to study geography, he would not desire to surround himself with a thousand volumes detailing all the particulars of the various countries under heaven; he would find that a few maps, and a few books of the best kind, would be capable of giving a complete initiation into that science: so, also, if he were about to learn a new language, a very few volumes would suffice for his purpose. The same is true of medicine. Let him be well prepared in the outset, and a small number of books, well chosen, together with the personal investigations I have recommended, will soon render him master of all the grand outlines, and of many of the minute details of the science. The fault is, that our teachers have not begun right: they have attempted to lead us from generals to particulars; whereas, had they taught us by the method of synthesis, we should have made much greater progress with less trouble.

I have said nothing here of public clinical instruction, of the best manner of attending public lectures, and the various means of availing of such advantages as a great city furnishes.

My hearers have acquired sufficient experience of these matters to render any remarks from me unnecessary; but I hope that the observations I have ventured to offer in relation to the preliminary steps may not be devoid of some novelty and interest to many, who have had occasion, as I have had, to deprecate and discountenance a plan of procedure which I know prevails to a great extent in many parts of the country.



NATIONAL LIBRARY OF MEDICINE



NLM 01068429 6